REMARKS

This application has been reviewed in light of the Office Action dated January 29, 2007. Claims 1-25 are pending in this application, of which Claims 1, 9, and 25 are independent. Claim 1 has been amended to define more clearly what Applicants regard as the invention. Favorable reconsideration is respectfully requested.

As requested by the Examiner, a certified copy of the foreign priority document will be submitted separately.

Claims 1-20 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Office Action states at page 5 that "Claims 1-20 discuss a method and system of emulating a design under test, however the claims do not produce a useful, concrete and tangible result since the claims refer only to a connection between two hardware parts rather than, for example, an actual emulating implementation." This rejection is respectfully traversed.

First, regarding method Claims 1-8, while Applicants do not concede the propriety of the rejection, in order to expedite prosecution, independent Claim 1 has been amended to recite performing stimulation, using the reconfigurable test bench, of the emulator of the device under test to produce emulation test results.

35 U.S.C. § 101 provides: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

Regarding Claims 9-20, it is submitted that independent Claim 9 is in fact directed to statutory subject matter, because the claim is directed to a system, which is a "machine" under the statutory categories of 35 U.S.C. § 101 (i.e., a process, machine, manufacture, or composition of matter), and does not fall within any of the "judicial exceptions" (i.e., laws of nature, natural phenomena, and abstract ideas).

To meet the requirements of 35 U.S.C. § 101, "[t]he claimed invention as a whole must accomplish a practical application. That is, it must produce a 'useful, concrete and tangible result.'" M.P.E.P. § 2106(II)(A) (quoting *State Street Bank & Trust v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed. Cir. 1998)).

Claim 9 recites an emulation system for emulating a design under test associated with a test environment. It is submitted that the claimed system is statutory because it produces a "useful, concrete and tangible result", i.e., the emulation of a design under test. Accordingly, it is submitted that Claim 9 is directed to statutory subject matter.

For all the foregoing reasons, withdrawal of the rejection under 35 U.S.C. § 101 is respectfully requested.

Claims 1-25 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,389,379 (*Lin*).

Generally speaking, the invention provides a hardware emulator having two reconfigurable hardware parts to implement the hardware model. A first reconfigurable hardware part is used to implement the synthesizable portion of the design under test, and a second reconfigurable hardware part, referred to as a Reconfigurable Test Bench (RTB), is used to implement the synthesizable portion of the test bench. Among the advantages

provided by the invention is that there is no need to re-compile the design under test when changing the mode of operation, because in such a case, only the RTB needs to be reconfigured.

Claim 1 recites a method of emulating a design under test associated with a test environment. The method includes generating, in a first phase, a first file for configuring the test environment, and generating, in a second phase, a second file for configuring at least a part of the design under test. The first configuration file is delivered to a first reconfigurable hardware part forming a reconfigurable test bench, so as to configure the test bench. The second configuration file is delivered to a second reconfigurable hardware part, so as to configure an emulator of the design under test. The method also includes performing stimulation, using the reconfigurable test bench, of the emulator of the device under test to produce emulation test results, The first and second reconfigurable hardware parts are distinct and mutually connected.

Lin, as understood by Applicants, relates to a converification system and method. A user's design is partitioned to generate a software model and a hardware model. The hardware model, including the synthesizable portions of the design under test and the test bench, is synthesized and implemented on a single reconfigurable hardware device, based on reconfigurable FPGA chips (Fig. 1, ref. no. 20). This mode of operation is referred to as "HDL co-simulation" or "simulation via hardware acceleration". Lin also discusses a way to run the hardware model in a second mode of operation, called in-circuit emulation (ICE), in which the hardware model interacts directly with an external hardware target system.

Therefore, Lin uses a single reconfigurable hardware model to implement both the design under test and the test bench.

The Office Action points to Fig. 67 and col. 11, lines 16-35 of Lin. In that portion of Lin, an RCC computing system (2081) has a software model of the device under test and a software-implemented test bench, and an RCC Array (2084) has a hardware model of the device under test. However, this cited portion of Lin still does not teach or suggest the two distinct reconfigurable hardware parts recited in Claim 1 - one for the test bench and one for the emulator of the device under test. Rather, the test bench in the arrangement shown in Lin's Fig. 67 is implemented in the software of the RCC computing system (2081).

Nothing has been found or pointed out in Lin that would teach or suggest a first configuration file being delivered to a first reconfigurable hardware part forming a reconfigurable test bench, so as to configure the test bench, and a second configuration file being delivered to a second reconfigurable hardware part, so as to configure an emulator of the design under test, the first and second reconfigurable hardware parts being distinct and mutually connected, as recited in Claim 1.

Accordingly, Claim 1 is believed to be patentable over Lin.

Independent Claims 9 and 21 recite features similar to those discussed above with respect to Claim 1 and therefore are also believed to be patentable over Lin for the reasons discussed above.

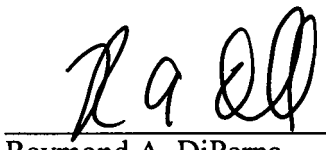
The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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